(N = 275) was 7.17 eggs. Replacement (5.81, N = 16) and second clutches (5.80, N = 19) were significantly smaller than first clutches. Eighty-eight percent of all nesting attempts produced full clutches and 71% yielded at least one fledgling. Mean sizes of first (5.45) and second broods (5.37) were not significantly different but replacement broods (3.83) were significantly smaller. On average, 5.09 young fledged per first brood, 4.94 per second brood, and 3.60 per replacement brood. Second attempts were more likely to produce fledglings than either first or replacement attempts. Sixty-three percent of all eggs laid hatched and 55% produced fledglings. Of eggs that hatched, 88% survived to fledging. March 13 was the mean date for initiation of egg laying and latest second clutches hatched on October 4. Persistent snow cover and low winter temperatures significantly delayed onset of egg laying and reduced the number and success of breeding attempts annually. Clutch size, however, did not differ significantly among years or among nest sites. Most barn owls bred only once, but if both individuals of a pair survived into subsequent breeding seasons, pairs typically remained intact. Most mortality occurred in winter due to a combination of exposure and starvation.

POST-FLEDGING MORTALITY: A SURVIVAL BOTTLENECK FOR PRAIRIE FALCONS?

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We studied the cause and frequency of mortality on prairie falcons (*Falco mexicanus*) during the 1992 post-fledging period in Idaho's Snake River Birds of Prey Area. We instrumented 78 nestlings from 19 broods with 6-g tarsal-mount transmitters and monitored their survival until they dispersed from the natal territory. Overall, 28% (N = 22) of fledged falcons died before dispersal (mean mortality age = 41 d, range = 32.5–60.5 d). Predation by great horned owls (*Bubo virginianus*) and golden eagles (*Aquila chrysaetos*) accounted for 36.3% of the mortality and ectoparasite infestations were implicated in 18.2% of the mortality. We could not determine the causes of 45.5 percent of all mortality because carcasses were scavenged and/or decomposed. Parental attendance (% time spent in the territory) and prey delivery rates (prey items/hr) during late brood rearing (N = 11 broods) were not correlated with post-fledging mortality. There was a trend (P = 0.054) for broods that hatched later in the season to experience higher mortality than earlier hatched broods. Survivorship was not correlated with nestling weight or brood size. Post-fledging mortality is relatively high and appears to occur randomly.

STATUS OF WINTERING BALD EAGLES IN WASHINGTON WITH EMPHASIS ON THE NORTH CASCADE DRAINAGES (1982–90)

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The number of bald eagles nesting in Washington has recently met or exceeded the goals outlined in the Recovery Plan for most of the management zones in the state. As a result, the U.S. Fish and Wildlife Service is currently considering removing the bald eagle in Washington from the federal list of threatened species. Although the number of successful nesting pairs and productivity are probably the best way to determine the status of the bald eagle population in a given state, the ability to sustain wintering eagles has implications for breeding populations that occur well beyond state boundaries. Consequently, the objective of this paper is to summarize the status of wintering bald eagles in Washington from 1982, when the mid-winter counts were standardized, to the present (1990). Trends in peak counts for this period were evaluated for the entire state, different regions, and individual drainages or areas of high concentration. A preliminary analysis indicated that the peak winter bald eagle counts from the Skagit River represented 23% of the state total in 1989. Particular emphasis was, therefore, placed on assessing the contribution of each of four major drainages in the North Cascades (Nooksack, Skagit, Stillaguamish, and Skykomish rivers) to the overall state totals. Peak winter counts of bald eagles in the Skagit River Bald Eagle Natural Area were found to be significantly correlated to chum salmon escapement for the Skagit drainage, and a similar analysis was applied to the other drainages. Results can be applied to the management of core bald eagle wintering areas and primary prey concentrations in the state.

THE ELUSIVE CARACARA: PRELIMINARY INFORMATION FROM SOUTH CENTRAL FLORIDA

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Investigations were conducted on the feasibility of studying the Crested Caracara (*Polyborus plancus*) in Florida, which occurs as an isolated population and which presently is listed as threatened at both the state and federal levels. Currently, the major threat to the caracara's persistence in Florida appears to be habitat loss through conversion to citrus groves, development, and other agricultural uses. This study was initiated partly as an evaluation of the value of cattle ranches, which cover extensive areas in southcentral Florida, to native wildlife. As grassland habitats, these ranches may be some of the few remaining areas that provide suitable habitat for caracaras. Recently, a successful trapping technique has been developed, resulting in the capture and marking of several individual birds, in anticipation of further long-term studies. Data